

Study Findings: Wave 2

The results of Wave 1 served as the basis for revising the questions. The questions were revised in an attempt to make them easier to understand and answer accurately. The purpose of Wave 2 was to test the revised set of questions. As with Wave 1, Wave 2 had 18 respondents, nine cognitive interviewees and nine focus group participants.

Overall, Wave 2 respondents were also diverse by age, ethnicity/race, and income and by number of children in the household. Four of the cognitive interviewees were African American, one was Asian and three were Caucasian. All of the mothers except for one had completed some higher education beyond high school. Out of these eight respondents, two mothers had completed postgraduate education. Five of the cognitive interviewees had two children. Three respondents had only one child and one respondent had three children.

For the Wave 2 focus group, five mothers were African American, one mother was Asian American, and the remaining were Caucasian. Seven mothers also had two school-aged children. Three mothers had some college education or less, while the remaining participants had completed college.

Table 7 presents the initial revisions made to the set of test questions based on the analysis of the Wave 1 data. Changes are underlined.

Table 7. The Revised Set of ECLS-B Test Questions Used in Wave 2 Cognitive Interviews

1. During the past 7 days, including afterschool activities, sports, and the weekend, how many glasses of milk did your child drink? Include all types of milk, including cow's milk, soy milk or any other kind of milk; include the milk your child drank in a glass or cup, from a carton, or with cereal. Count the half pint of milk served at school as equal to one glass.

- 1 *Child did not drink milk during the past 7 days.*
- 2 *1 to 3 glasses during the past 7 days.*
- 3 *4 to 6 glasses during the past 7 days.*
- 4 *1 glass per day.*
- 5 *1 to 2 glasses per day*
- 6 *2 glasses per day.*
- 7 *3 glasses per day.*
- 8 *4 or more glasses per day.*

2. What kind of milk did your child usually (most often) drink during the past 7 days?

- 1 *Whole milk*
- 2 *2% milk.*
- 3 *Skim milk.*
- 4 *Low fat or 1% milk.*
- 5 *Soy milk.*
- 6 *Both regular cow's milk and soy milk.*

Table 7. The Revised Set of ECLS-B Test Questions Used in Wave 2 Cognitive Interviews

7 *Some other kind of milk.*

3. During the past 7 days, including afterschool activities, sports, and the weekend, how many times did your child drink 100% fruit juices such as orange juice, apple juice, or grape juice? Do not count punch, Sunny Delight, Kool-Aid, sports drinks, or other fruit-flavored drinks.

1 *Child did not drink 100% fruit juice during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

5 *1 time per day.*

6 *1 to 2 times per day*

6 *2 times per day.*

7 *3 times per day.*

8 *4 or more times per day.*

4. During the past 7 days, including afterschool activities, sports, and the weekend, how many times did your child drink Soda pop (for example, Coke, Pepsi, or Mountain Dew), sports drinks (for example, Gatorade), or fruit drinks that are not 100% fruit juice (for example, Kool-Aid, Sunny Delight, Hi-C, Fruitopia, or Fruitworks)?

1 *Child did not drink any during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

7 *1 time per day.*

8 *1 to 2 times per day*

6 *2 times per day.*

7 *3 times per day.*

9 *4 or more times per day.*

5. During the past 7 days, including afterschool activities, sports, and the weekend, how many times did your child eat fresh fruit such as apples, bananas, oranges, berries, other fruit such as applesauce, canned peaches, canned fruit cocktail, or frozen berries (Do not count fruit juice.)

1 *Child did not eat fruit during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

4 *1 time per day.*

5 *1 to 2 times per day*

6 *2 times per day.*

7 *3 times per day.*

8 *4 or more times per day.*

6 During the past 7 days, including afterschool activities, sports, and the weekend, how many times did your child eat green salad?

1 *Child did not eat green salad during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

4 *1 time per day.*

5 *1 to 2 times per day*

6 *2 times per day.*

7 *3 times per day.*

8 *4 or more times per day.*

Table 7. The Revised Set of ECLS-B Test Questions Used in Wave 2 Cognitive Interviews

7. During the past 7 days, including afterschool activities, sports, and the weekend, how many times did your child eat potatoes? (DO NOT count French Fries, fried potatoes, potato chips or sweet potatoes).

- 1 *Child did not eat potatoes during the past 7 days.*
- 2 *1 to 3 times during the past 7 days.*
- 3 *4 to 6 times during the past 7 days.*
- 4 *1 time per day.*
- 5 *1 to 2 times per day*
- 6 *2 times per day.*
- 7 *3 times per day.*
- 8 *4 or more times per day.*

8. During the past 7 days, including afterschool activities, sports, and the weekend, how many times did your child eat carrots?

- 1 *Child did not eat carrots during the past 7 days.*
- 2 *1 to 3 times during the past 7 days.*
- 3 *4 to 6 times during the past 7 days.*
- 4 *1 time per day*
- 5 *1 to 2 times per day.*
- 6 *2 times per day.*
- 7 *3 times per day.*
- 8 *4 or more times per day.*

9. During the past 7 days, including afterschool activities, sports, and the weekend, how many times did your child eat other vegetables, such as sweet potatoes or broccoli? (DO NOT count green salad, potatoes, French fries, or carrots.)

- 1 *Child did not eat other vegetables during the past 7 days.*
- 2 *1 to 3 times during the past 7 days.*
- 3 *4 to 6 times during the past 7 days.*
- 4 *1 time per day.*
- 5 *1 to 2 times per day.*
- 6 *2 times per day.*
- 7 *3 times per day.*
- 8 *4 or more times per day.*

10. During the past 7 days, including afterschool activities, sports, and the weekend, about how many times did your child eat a meal or snack from a fast food restaurant with no wait service such as McDonald's Pizza Hut, Burger King, KFC (Kentucky Fried Chicken), Taco Bell, Wendy's and so on? Consider both eating out, carry out and delivery of meals in your response. Would you say:

- 1 *Child did not eat food from a fast food restaurant during the past 7 days.*
- 2 *1 to 3 times during the past 7 days.*
- 3 *4 to 6 times during the past 7 days.*
- 4 *1 time per day.*
5. *1 to 2 times per day.*
- 6 *2 times per day.*
- 7 *3 times per day.*
- 8 *4 or more times per day.*

Table 7. The Revised Set of ECLS-B Test Questions Used in Wave 2 Cognitive Interviews

11. During the past 7 days, including afterschool activities, sports, and the weekend, how many times did your child eat candy (including Fruit Roll Ups and similar items), ice cream, cookies, cakes, brownies, or other sweets? Would you say:

- 1 *Child did not eat sweets during the past 7 days.*
- 2 *1 to 3 times during the past 7 days.*
- 3 *4 to 6 times during the past 7 days.*
- 4 *1 time per day.*
- 5 *1 to 2 times per day.*
- 6 *2 times per day.*
- 7 *3 times per day.*
- 8 *4 or more times per day.*

12. During the past 7 days, including afterschool activities, sports, and the weekend, how many times did your child eat potato chips, corn chips (Fritos, Doritos), Cheetos, pretzels, popcorn, crackers or other salty snack foods?

- 1 *Child did not eat salty snack foods during the past 7 days.*
- 2 *1 to 3 times during the past 7 days.*
- 3 *4 to 6 times during the past 7 days.*
- 4 *1 time per day.*
- 5 *1 to 2 times per day*
- 6 *2 times per day.*
- 7 *3 times per day.*
- 8 *4 or more times per day.*

13. During the past 7 days, including afterschool activities, sports, and the weekend, how many times did your child eat French fries or fried potatoes?

- 1 *Child did not eat French fries or fried potatoes during the past 7 days.*
- 2 *1 to 3 times during the past 7 days.*
- 3 *4 to 6 times during the past 7 days.*
- 4 *1 time per day.*
- 5 *1 to 2 times per day.*
- 6 *2 times per day.*
- 7 *3 times per day.*
- 8 *4 or more times per day.*

Understanding Of The Terminology

- a. Do the respondents interpret the questions, as asked, in the manner intended by ERS? If not, are there changes in wording that will improve understanding?

Table 8 presents the answers provided by Wave 2 respondents to the eating habit questions. Similar to Wave 1 respondents, there were no mothers who refused to answer the question, nor did any provide a “don’t know” response. The distribution of responses suggests that mothers were generally able to use the given response options appropriately. What is interesting is to see

the way in which mothers in this wave of the interviewing use the new response option “1 to 2 times per day”. The option “1 to 2 times per day” was used by mothers for the items consumed on an everyday basis by small children with some frequency: milk, 100% fruit juice, and fresh fruit in particular.

Table 8. Answers Provided To The Eating Habit Questions By Wave 2 Cognitive Interview Respondents

Food Item	Question Response Options							
	Child did not eat/drink during the past 7 days	1 to 3 times during the past 7 days	4 to 6 times during the past 7 days	1 time per day	1 to 2 times per day	2 times per day	3 times per day	4 or more times per day
Milk	0	2	1	0	3	2	0	1
100% fruit juice	0	1	2	3	3	0	0	0
Drinks not 100% fruit juice	0	2	2	0	0	0	1	0
Fresh fruit	0	1	0	1	5	2	0	0
Green salad	4	3	2	0	0	0	0	0
Potatoes (not fried)	4	5	0	0	0	0	0	0
Carrots	2	4	3	0	0	0	0	0
Other vegetables	2	0	2	2	2	1	0	0
Fast food	3	6	0	0	0	0	0	0
Candy, ice cream, cookies, cakes, brownies, or other sweets	0	0	4	2	3	0	0	0
Salty snacks	1	4	3	0	1	0	0	0
French fries or fried potatoes	4	5	0	0	0	0	0	0

As in Wave 1, items that were consumed less frequently include green salad, potatoes that were not fried, fast food, and French fries or other fried potatoes. Notably, “4 or more times per day” was only selected once, as was “3 times per day.”

Table 9. Mean Ratings Of Ease Of Answering The Eating Habit Questions

Question Number	Food Item	Mean Rating	Rating Scale		
		1= "very easy" to 3 ="not at all easy"			
			Very Easy	Somewhat Easy	Not At All Easy
			(%)	(%)	(%)
Q11	Candy, ice cream, cookies, cakes, brownies, or other sweets	1.7	44	44	11
Q12	Salty snacks	1.6	44	56	0
Q7	Potatoes (not fried)	1.4	67	22	11
Q9	Other vegetables	1.4	56	44	0
Q1	Milk	1.3	67	33	0
Q3	100% fruit juice	1.3	67	33	0
Q8	Carrots	1.2	78	22	0
Q4	Drinks not 100% fruit juice	1.2	78	22	0
Q5	Fresh fruit	1.1	89	11	0
Q6	Green salad	1.1	89	11	0
Q2	Type of milk	1.1	89	11	0
Q10	Fast food	1.1	89	11	0
Q13	French fries or fried potatoes	1.0	100	0	0

The mean ratings indicate that there are some key differences between Wave 1 and Wave 2. For example, respondents in Wave 2 found the questions on candy, ice cream, cookies, cakes, brownies, or other sweets, salty snacks, potatoes (not fried) and other vegetables to be most difficult to answer. In Wave 1, questions on milk, 100% fruit juice and fresh fruit consumption were most difficult. Recall that Wave 2 interviews included some additional wording designed to help mothers recall all of the opportunities where their child may have consumed a food item. It is likely that this language increased the difficulty for some of these questions where the food item was consumed less frequently over all, as mothers were specifically asked to think about and account for times what their child ate when their child was not in their presence. As will be described further below, quite a few mothers in the cognitive interviews readily admitted that they could not be sure their child actually ate an item away from home. Additionally the use of the “1 to 2 times per day” option for the items that were most difficult in Wave 1 suggests that this response option decreased the difficulty by providing a means to account for fluctuation in what the child actually consumed when mothers used the daily tally method for coming up with an answer, for responding for just the past twenty-four hours and for developing a response that covered the past week. The following quotes from some of the interviews add some insight to how mothers approached the questions in Wave 2:

Wave 2 Cognitive Interviewee 1: It was hard to keep track of everything, afterschool, with their dad. It was difficult...trying to remember when exactly. Was it this week or last week? You know, recalling the seven days backward, to a specific date.

Wave 2 Cognitive Interview 3: It {the question} was pretty easy. But I think that -- just trying to think -- again, think back to, you know, the kinds of food she ate the last seven days. But I think it's easier like when I think of, okay, well, that was something they had. I think just accounting for the variability is hard. I was just trying to think of what we ate last week and what the -- like when she bought a school lunch, what was on the menu, where we were.

Understanding the Language Used In Each Question

Overall, the additional language clarified the questions for mothers and improved the recall of consumption that occurred outside of the mother's presence, thus improving the completeness of responses. As with Wave 1, mothers clearly understood terms like "green salad," "sports drinks," and "100% fruit juice." However, mothers in the Wave 2 focus group felt that the language included in Q9 to prompt "other types of vegetables" was not helpful and recommended eliminating it completely.

Q1, "glasses" of milk. Wave 2 focus group respondents raised some issues with the language "glasses." In Q1, the mothers felt that using the term "glasses" did not seem to fit in with the rest of the questions, and it made them wonder if what they provided as a glass was appropriate, or if they had misunderstood the question. A natural outcome from the discussion about glasses was what glass size (8 oz, 6 oz) was considered a serving. This discussion made four respondents think about how much is in a serving and convert what they believed their child had consumed into "servings" based on their understanding, instead of how often milk was provided. Other mothers focused on how many times their child actually had milk.

The addition of the statement "including afterschool activities, sports, and the weekend" to each question. The addition of this wording at the beginning of each question did indeed help mothers in both the interviews and the focus group to better recall opportunities where their child may have consumed the food items in each of the eating habit questions. Five mothers in the cognitive interviews, and most of the mothers in the focus group commented that they liked the reminder, because it helped them to think about all the places where their child may have consumed something. Two focus group respondents noted that having the reminder in every question made the questions seem a bit longer, but these mothers still affirmed the value of having the language for each question, rather than just once or twice with a question. A few mothers in the focus group and two mothers in the interviews suggested also adding the words "play date," as that was the main activity kindergarteners might be at outside of the home, as many were too young to play an organized sport.

The addition of "with no wait service" and "Consider both eating out, carry out and delivery of meals in your response." to Q10. The addition of this language appeared to work well in clarifying the kinds of places mothers should consider in answering the question about eating fast food. In particular, focus group respondents did not seem to struggle with whether or

not to include all of the meals their child ate outside of the home in a restaurant in their response to the revised question.

Addition of “Fruit Roll Ups and similar items” to Q 11. Mothers in the cognitive interviews did not raise any concerns with the addition of this language. Mothers in the focus group indicated that it helped them to better classify the foods their child had consumed by knowing to include Fruit Roll Ups and similar snacks in responses to Q11. However, a few mothers still felt that these types of foods were “better snacks” than the others included on the list, and expressed some reluctance at having to include them in their response to this question.

Potatoes that were not French fries or fried. The inclusion of the wording “sweet potatoes” on the DO NOT COUNT list for Q7 was viewed as moderately helpful.

Other Food Classification Issues. Some mothers still encountered difficulties in classifying other vegetables that were included as a major portion of a main dish, or served in a mix. Two of the interviewees simply didn’t count these foods, while three of the focus group respondents expressed that they weren’t sure where to classify these items, which included things like stir fry and the vegetables that were a part of a soup. One mother in the focus group raised the question about where to count vegetable juice. Fewer mothers than in Wave 1 raised concerns with knowing what kind of potatoes to include in Q7.

Two mothers who completed an interview recommended adding the words “dried fruit” to the list of fruits provided in Q5. These mothers indicated that the addition of this wording would assist them in knowing whether to include dried fruit as a part of their child’s fruit consumption, given that the question currently asks for fresh, canned and frozen fruit. This language was added to the question for the focus group, where it was well received.

As with Wave 1, mothers in Wave 2 were surprised that other dairy foods, specifically cheese and yogurt, were not asked for. Once again, many mothers wanted to provide an answer for overall dairy consumption, particularly if their child had milk allergies and obtained calcium in some other way. Even among mothers whose children did drink a lot of milk, it was felt that the exclusion of cheese and yogurt didn’t provide them with an opportunity to best reflect what their child consumed. Mothers raised similar concerns about the exclusion of meats, breads and grains, and water as well. The general comments about the exclusion of these items focused on mothers having a better understanding of the intent of the questions, as many believed that the food categories that were asked about didn’t communicate a full picture of the basic consumption of their child.

Recall Ability And Preferences for Answering For Times Per Day Versus Times Over The Course Of A Week

- b. What time period do respondents feel more comfortable with, in responding to the questions—for example, the past 24 hours or the past week?

Respondents talked more readily in this wave of the study about difficulties they faced in recalling what had occurred over the past seven days. Four of the nine interviewees commented that it was challenging for them to recall what had actually taken place over the last week and what foods their child had actually consumed. They expressed a preference for providing an answer for a shorter period of time. In particular, mothers who provided this feedback seemed to be trying to recall specific events or changes to their routine schedule in order to make determinations about what their child had consumed. When asked to respond for the past week, these mothers selected the response options that used the language times per day, as responding in terms of times per week was viewed as too complex to recall as a whole.

As with Wave 1, respondents demonstrated a preference for answering questions for items consumed more frequently with the “times per day” options. Most mothers in the cognitive interviews communicated that this was easier for them, because they could tally up the items their child had eaten on a day-to-day basis. Overall, the items per week option was used for foods consumed less frequently, as described in Wave 1. Mothers did seem to use the “1 to 2 times a day” option for items consumed more regularly as well, particularly fresh fruit. It seems as if this option did provide mothers with a means of answering the question using the daily tally method.

As with Wave 1, mothers were able to recall what their child consumed over the past twenty-four hours more easily than over the past seven days. However, while mothers admitted that this would be much easier, there was some hesitancy on the part of mothers for answering in this manner. Barriers to answering for just the past twenty-four hours included the tensions mothers experienced in wanting to provide the response that best described what their child ate, combined with the concern that answering for a day did not reflect the best of their child’s eating habits, particularly if the day in question did not follow the “normal” schedule. In the Wave 2 focus group discussion, about half of the mothers indicated that the best way for mothers to answer the questions would be either to provide clear instructions asking for an average for the week, or to ask specifically about fewer days. These mothers believed that it was easier to tally foods and reconcile the fluctuation in their child’s preferences by answering for one to three days instead of the week. The main reason seemed to be the better ability to recall with more accuracy what was eaten.

It is interesting to note that when asking mothers about the past twenty-four hours, the additional descriptive information provided by mothers still indicated that the recall strategies described earlier were used, particularly relying on a menu, or viewing offering a food the same as the child consuming it. This type of reconstruction of what may have been consumed still occurred, thus there were still areas for misrepresentation to occur even when asking about the past twenty-four hours.

Using the Response Options

- c. Are the response options suggested by ERS appropriate? Are respondents able to use these response options to describe their children's behavior? If not, are there changes in response options that would be more appropriate?

Mothers in Wave 2 understood the time ranges described in the response options, and had no problem conceptualizing the past seven days, which was generally understood to include the weekend and previous five weekdays. As with Wave 1, Wave 2 interviewees and focus group participants described using a variety of cognitive strategies to develop their answers, often combining methods to develop an answer for one question.

Once again, many mothers in both the interviews and particularly in the focus group expressed some frustration because they could not determine precisely what their child had consumed for either the past day or past seven days. Five cognitive interview respondents indicated that this was a reoccurring problem for them in supplying an answer, while six of the nine focus group respondents indicated that this was the case. As with the Wave 1 respondents, mothers used the strategies of recalling what they had purchased, their child's regular habits and schedule, and what was left in the refrigerator at the end of the week to reconstruct what food items were consumed by their child. Mothers in this wave of the interviewing more readily discussed the fact that they could only guess what their child may have consumed at school, and that there was no real way of knowing. Many mothers relied on knowing what they served as a means of answering the question. About half of the mothers who used this strategy commented that while it was easy to remember what they prepared for a meal, it was much more difficult to determine whether their child ate the food, or how much of the food the child ate. The following statements are examples of how mothers used different strategies to develop their response to what their child consumed.

Wave 2 Cognitive Interviewee 5: "I pretty much fix all their meals. So I know what they have."

Wave 2 Cognitive Interviewee 4: "I know what activities are planned on different days, so that way I can -- based on the activities, I can somewhat guess whether or not they're more likely to be out and grab fast food, which would mean most likely they would drink soda or some other watered-down juice product."

Wave 2 Cognitive Interviewee 8: "I just try to average in the times I'm not certain about, like, okay, thinking, you know, how many play dates? How many other things did she do that I'm not certain about?"

Based on analysis of the descriptions of how mothers arrived at their answers, some mothers still relied upon a strategy of determining an average response for their child, even though the question wording does not indicate that they should do so. This was the case for answering for either the past day or the past seven days. As the previous quote illustrates, some mothers described thinking about how many times an item was served and rounding it off to arrive at their answer.

Mothers in Wave 2 confirmed that self-service snacking was not an unusual practice. It was also still the most problematic for mothers in terms of tallying a number of times per day for the reasons stated in Wave 1. However, some of the discussion provided additional insight as to how mothers incorporated these practices into their responses. One cognitive interviewee commented that she just counted times, while another mother said that her child usually told her when he was going to refrigerator, so she could generally track how often he snacked on foods in this fashion.

In Wave 2, mothers in the focus group also experienced difficulty in classifying some of the responses because of the language “times.” Five of nine mothers in the focus groups indicated that they had some trouble with the questions because they wanted to respond in terms of a serving or a portion size, rather than a “time.” This concern was discussed further as mothers compared the wording of the response options across all of the questions. A few mothers in this focus group stated that for them, figuring out a serving would have been easier. As a way of shifting the focus away from the term serving, some mothers suggested that the language for all of the response options refer to “times.”

As with Wave 1, there were some mothers who determined that their child consumed a food item by the fact that they had prepared it or served it. This raises the possibility that additional language or instruction needs to be added to the question to remind mothers not to count consumption in this manner.